

## PATENT ABSTRACTS OF JAPAN

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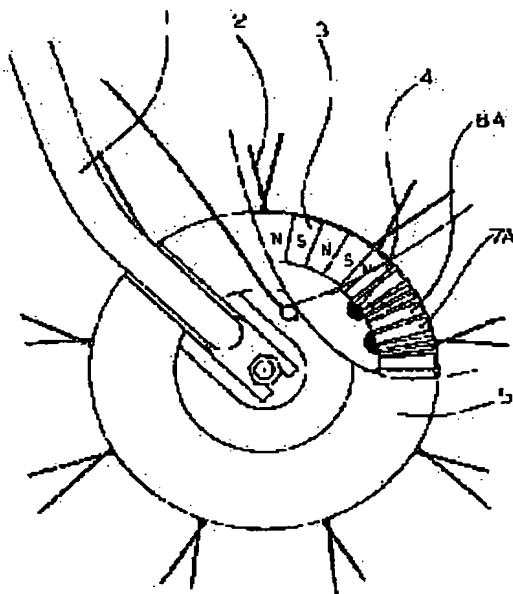
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## (54) GENERATOR DEVICE FOR BICYCLE



## (57) Abstract:

PURPOSE: To reduce a resistance load at the time of a travel and allow a lighter travel without lowering generated power, regarding a generator device for a bicycle.

CONSTITUTION: The yoke pieces 7A and 8A of a power generation coil body of a generator are divided with a slit at one-sided position respectively, and formed to have a different area in right and left sections. In addition, the adjacent yoke pieces 7A and 8A are divided respectively at opposite positions.

## [Claim(s)]

[Claim 1] So that may paste a rotator 6, an axle 11 and the annular magnet 3 magnetized alternately with N pole south pole horizontally may be formed, it may attach in a wheel side face and a rotator 6 may be countered So that the stator 5 which pasted up the generation-of-electrical-energy object which was combined so that a toroidal coil 4 might be wrapped, and which consists of York 7 and York 8 may be fixed to an axle 11 through bearing 9 and it may counter with the magnet side of the annular magnet 3 In the power plant which projected piece of York 7A, and piece of York 8A from York 7 and York 8 by turns to the radial The power plant of a bicycle which divides each of this piece of York 7A, and piece of York 8A to a slit 12 in the location which approached one side, and is characterized by having considered as the piece of York from which a

divided area on either side differs, and dividing adjoining piece of York 7A and piece of York 8A in a respectively opposite location.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the power plant of a bicycle which forms a power plant in attachment-and-detachment freedom, runs lightly on the wheel side face of a bicycle, and can be generated with a light load on it.

[0002]

[Description of the Prior Art] These people form previously an axle and the annular magnet 3 of the a large number pole magnetized horizontally in a wheel side face. So that the generation-of-electrical-energy object which was combined so that a toroidal coil 4 might be wrapped and which consists of York 7 York 8 may be pasted up and prepared in a stator 5 so that it may be countered, and it may fix to an axle 11 and it may counter with the magnet side of the annular magnet 3 The power plant of the bicycle which generates a projection and power for piece of piece of York 7A York 8A in a radial was invented.

[0003]

[The technical problem which invention makes solution \*\*\*\*\*] To the center line, for the area of bilateral symmetry, the suction force generated in each piece of York occurred in coincidence, and the trouble which it is going to cancel became a strong suction force, and had the trouble which produces a strong intermittent load at the time of transit of a bicycle in piece of York 7A projected to the radial of a power plant conventionally [ above-mentioned ], and piece of York 8A.

[0004]

[Means for Solving the Problem] In order to solve the above-mentioned purpose, this invention has the following technical means.

[0005] Namely, so that this invention may paste up an axle 11 and the annular magnet 3 magnetized alternately with N pole south pole horizontally on a rotator 6, it may prepare, it may attach in a wheel side face and a rotator 6 may be countered, if it explains using the sign of the accompanying drawing to an example So that the stator 5 which pasted up the generation-of-electrical-energy object which was combined so that a toroidal coil 4 might be wrapped, and which consists of York 7 and York 8 may be fixed to an axle 11 through bearing 9 and it may counter with the magnet side of the annular magnet 3 In the power plant which projected piece of York 7A, and piece of York 8A from York 7 York 8 by turns to the radial The power plant of the bicycle which divided each of this piece of York 7A, and piece of York 8A to the slit 12 in the location which approached one side, considered as the piece of York from which a divided area on either side differs, and divided adjoining piece of York 7A and piece of York 8A in the respectively opposite location.

[0006]

[Function] piece of York 7A projected with \*\*\*\*\* in the above-mentioned configuration at the radial, and piece of York 8A -- respectively -- alike -- setting -- right and left -- by dividing to a slit 12 in an opposite location It works so that the suction force generated in adjoining each piece of York 7A and piece of York 8A may deny mutually, resistance with the intermittent wheel at the time of transit is made to decrease, and a wheel is rotated smoothly, and it generates electricity, without moreover reducing generated output, and light transit is enabled.

[0007]

[Example] Hereafter, the example of this invention is explained in full detail.

[0008] Adhesion immobilization of piece of York 7A which shows the forward flat-tapped section end chip Fig. of one example of this invention, and the piece of York 8A is carried out by turns at the stator 5, and Fig. 1 is divided to the slit 12 in the respectively opposite location.

[0009] So that \*\*\*\*2 is the sectional view of one example of this invention, may paste a rotator 6, an axle 11 and the annular magnet 3 magnetized alternately with N pole south pole horizontally may be formed, it may attach in a wheel side face and a rotator 6 may be countered So that the stator 5 which pasted up the generation-of-electrical-energy object which was combined so that a toroidal coil 4 might be wrapped, and which consists of York 7 and York 8 may be fixed to an axle 11 with a locknut 14 through bearing 9 and it may counter with the magnet side of the annular magnet 3 In the power plant which projected piece of York 7A, and piece of York 8A from York 7 and York 8 by turns to the radial Each of this piece of York 7A and piece of York 8A is divided to a slit 12 in the location which approached one side, it considers as the piece of York from which a divided area on either side differs, and adjoining piece of York 7A and piece of York 8A are divided in a respectively opposite location.

[0010] The end of the toroidal coil 4 of a generation-of-electrical-energy object is grounded to York 7 and York 8, and an end comes out of a stator 5, is connected with an output terminal 10, and already supplies power.

[0011] Fig. 3 and Fig. 4 show an example of the configuration of piece of York 7A of this invention, and piece of York 8A, and are divided to the slit 12 in the respectively opposite location. Moreover it is drawing having shown signs that adjoining piece of York 7A and piece of York 8A negated a suction force mutually, and rotated smoothly, as long as the configuration of a slit 12 divides the piece of York magnetically, what kind of configurations, such as a hole-like slit, are sufficient as it.

[0012]

[Effect of the Invention] As explained in full detail, this invention As mentioned above, piece of York 7 from York 7 and York 8 A, In the power plant which fixed to the axle the power plant which projected piece of York 8A by turns to the radial free [ attachment and detachment ] This piece of York 7A and piece of York 8A are divided to a slit 12 in the location of the right-and-left contrary, respectively. It generates electricity smoothly by negating mutually the suction force committed to adjoining piece of York 7A and piece of York 8A. Decreasing the load of the wheel at the time of transit of a bicycle, moreover, piece of York 7A and piece of York 8A enable light transit, without reducing generated output, since [ of the annular magnet 3 ] the whole surface is covered mostly although divided to the slit 12.

[Brief Description of the Drawings]

[Drawing 1] It is the forward flat-tapped section end chip Fig. of the example of this invention.

[Drawing 2] It is the sectional view of the example of this invention.

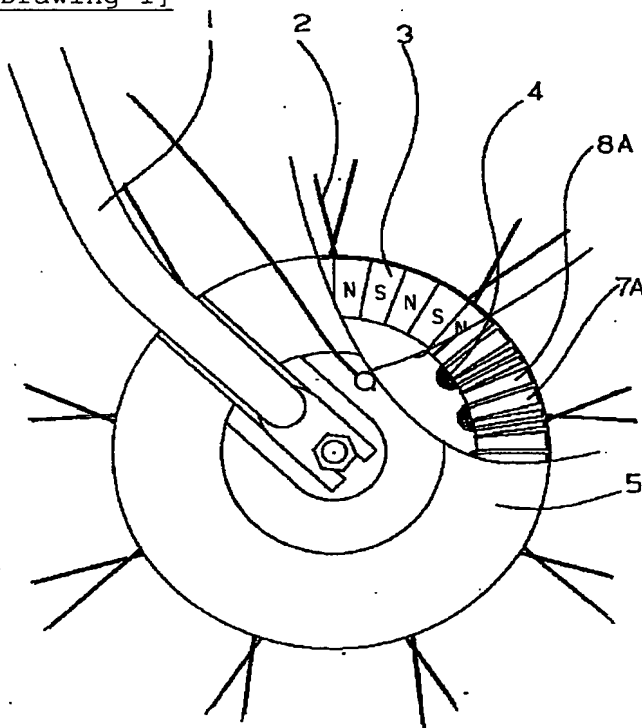
[Drawing 3] It is drawing of one example of the piece of York of this invention.

[Drawing 4] It is drawing of one example of the piece of York of this invention.

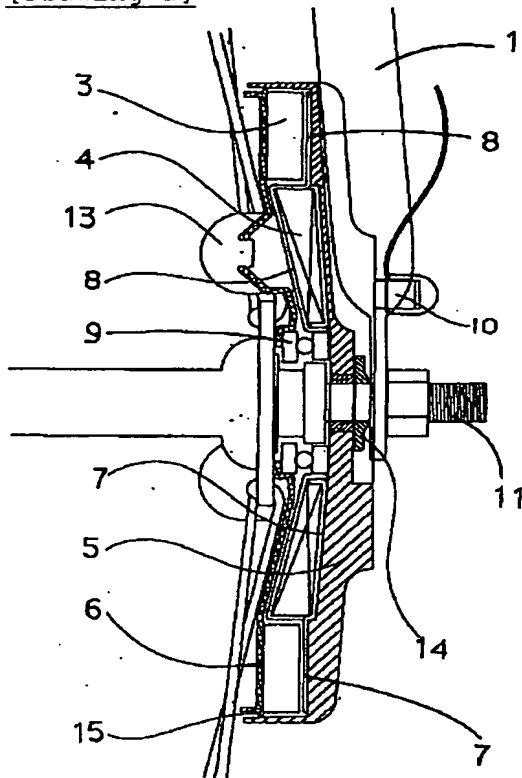
[Description of Notations]

- 1 Front-Wheel Fork
- 2 Spoke
- 3 Annular Magnet
- 4 Toroidal Coil
- 5 Stator
- 6 Rotator
- 7 York
- 7A The piece of York
- 8 York
- 8A The piece of York
- 9 Bearing
- 10 Output Terminal
- 11 Axle
- 12 Slit
- 13 Fixed Projection
- 14 Locknut
- 15 O Ring
- F Suction force

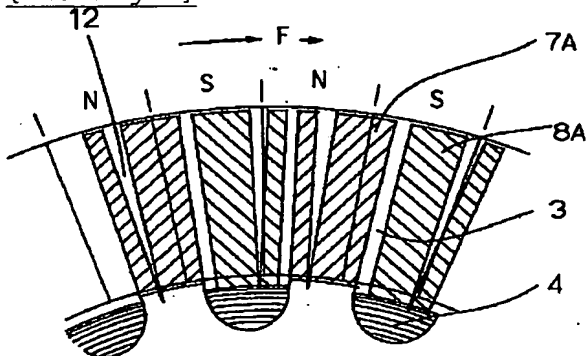
[Drawing 1]



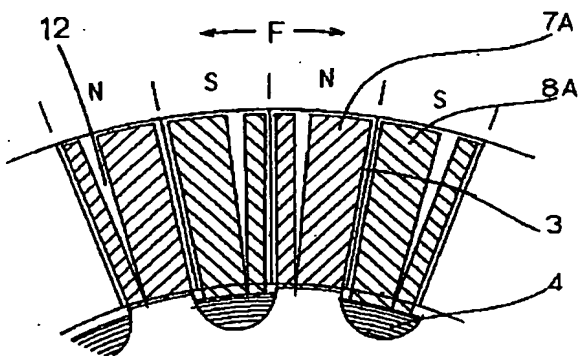
[Drawing 2]



[Drawing 3]



[Drawing 4]





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